

APPLICANTS: NUNES RAMOS DE CARVALHO,
Bruno Manuel
SERIAL NO.: To Be Assigned
FILED: Herewith
Page 5

Amendments to the Claims:

1. (Currently Amended) An autonomous garment with active thermal control and powered by solar cells, comprising:
a plurality of solar cells [[(1)]];
a plurality of batteries [[(2)]];
a plurality of resistors [[(3)]];
a refrigeration cycle [[(4)]];
a plurality of Peltier cells [[(5)]];
a microcontroller [[(6)]];
a plurality of pipes [[(7)]], an electric bus connector, a plurality of thermal sensors, and a plurality of plugs.
2. (Currently Amended) The garment system of claim 1, wherein the solar cells[[,]] are connected to an electric bus connector, are on the outer shell of the garment and include optical parts, a protection layer, and filters ~~with appropriate geometry optimized for solar spectrum or other.~~
3. (Currently Amended) The garment system of claim 1, wherein the batteries[[,]] are embedded in the garment, and are connected to the electric bus connector.
4. (Currently Amended) The garment system of claim 1, wherein [[a]] the set of resistors[[,]] are embedded in the garment and are connected to the electric bus connector, is properly and are distributed in the garment for delivery of heat.
5. (Currently Amended) The garment system of claim 1, wherein the Peltier cells[[,]] are embedded in the garment and are connected to the electric bus connector, and are properly distributed in the garment to produce heat and cold.

APPLICANTS: NUNES RAMOS DE CARVALHO,
Bruno Manuel
SERIAL NO.: To Be Assigned
FILED: Herewith
Page 6

6. (Currently Amended) The garment system of claim 1, wherein the ~~refrigerating~~ refrigeration cycle[[,]] is connected to the electric bus connector, ~~include~~ and includes pipes properly distributed in the garment for ~~delivery of~~ cooling.
7. (Currently Amended) The garment system of claim 1, ~~characterized by including at least one mechanism among comprising a device connected to the electric bus connector and selected from the group consisting of:~~ thermal sensors, luminous and sonorous signaling appliances, positioning systems, and power plugs, ~~connected to the electric bus connector.~~
8. (Currently Amended) The garment system of claim 1, ~~characterized by including comprising a microcontroller connected to the resistors, Peliter cells, batteries, solar cells, and refrigeration cycle all the electric devices,~~ via the electric bus connector, for the active thermal control of the garment.
9. (Currently Amended) The garment system of claim 1 ~~claims 1 and 8~~, wherein the microcontroller includes means to display data and software to control the thermal parameters.
10. (Currently Amended) The garment apparatus of an autonomous garment with active thermal control and solar cells adapted to convert fire radiation in electric power according to claim 1, wherein the solar cells are adapted to convert radiation from fire to electric power specially developed for uniform applications, e.g. for fireman.
11. (Cancelled).
12. (New) The system of claim 2, wherein the filters have a geometry optimized for the solar spectrum.